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AMSAT NEWS SERVICE
ANS-138

ANS is a free, weekly, news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

Please send any amateur satellite news or reports to:
ans-editor(a)amsat.org

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SB SAT @ AMSAT $ANS-138.01
AMSAT Introduces Team Namaste at Dayton Hamvention

AMSAT News Service Bulletin 138.01
>From AMSAT HQ SILVER SPRING, MD.
May 18, 2008
To All RADIO AMATEURS
BID: $ANS-138.01

Team Namaste, a new AMSAT engineering team, was introduced at the Dayton Hamvention held over May 16-18. AMSAT's Eagle and the Intelsat Phase IV ride-share project will include the Advanced Communications Package (ACP) supporting digital communications with a 5.6 GHz uplink and 3.4 GHz downlink.

Team Namaste includes the ACP Ground Segment led by Michelle, W5NYV and the ACP Satellite Segment led by Matt, N2MJI.

Michelle described the ground segment, "Namaste is the effort to develop a microwave band, digital signal capable earth station attainable by the average ham so users can immediately take advantage of the audio, digital messaging, and video services our new new satellites will provide."

Two key user audiences are the target of the Namaste earth station. Michelle describes the user base, "First we want to excite amateur radio operators who want to have fun using microwave bands to talk through a satellite employing digital communications techniques. Second, we want to serve emergency communications operators who need a reliable, infrastructure-independent system in order to get their work done."

The Ground Segment and Satellite Segment Teams are developing an RF link budget and system configuration which a reasonably priced amateur radio transceiver can attain. No commercial amateur radio gear exists for the GHz-frequency range and digital communication link

for the new mode on AMSAT high orbit satellites.

Antenna configuration and available power are limited on the satellite platform depending upon solar cells and batteries. Given the modern reality of CC&R's and antenna restrictions in many communities the baseline antenna at the amateur station is currently specified as a half-meter dish. This is the same type and size of dish many homes use for satellite television such as DirecTV.

Planning for the ACP includes 20 watts RF power with 18dB antenna gain at the spacecraft. The ground segment rule of thumb at present estimates 10 watts of transmitter power with the half-meter dish is needed. Further radio link budget and RF exposure safety issues are also being investigated.

AMSAT welcomes Team Namaste, leading the way to an exciting future of Amateur Radio in Space. Questions and comments can be sent via e-mail to namaste-dev(a)amsat.org. Team Namaste has a web page at: http://www.amsat.org/namaste.

[ANS thanks Michelle, W5NYV for the above information]

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SB SAT @ AMSAT $ANS-138.02
AMSAT Designates Delfi-C3 as DO-64

AMSAT News Service Bulletin 138.02
>From AMSAT HQ SILVER SPRING, MD.
May 18, 2008
To All RADIO AMATEURS
BID: $ANS-138.02

Bill Tynan, W3XO issued the following statement on behalf of the AMSAT Board of Directors this week:

By the authority vested in me by the AMSAT-NA President, I am pleased to issue an OSCAR number for the amateur radio satellite, Delfi C-3.

As attested to in a communication to the AMSAT-NA Board of Directors dated 8 May, 2008, from Wolter Jan Ubbels, the spacecraft's Project Manager; Delfi C-3 was successfully launched 28 April, 2008 from India aboard a Polar launch vehicle. Mr. Ubbels also states that the satellite was successfully commissioned and is currently transmitting telemetry on the 2 meter amateur band. In addition to its 2 meter downlink, Delfi C-3 has an uplink on the 70 cm band.

According to Mr. Ubbels, this newest amateur satellite was developed by a team of some 60 students and facility members in the fields of Aerospace Engineering, Electrical Engineering, Mathematics and Computer Science from various polytechnic schools in The Netherlands. Further, he states that Delfi C-3 carries 2 experiments, one involving thin film solar cells developed by Dutch Space and the other, an Autonomous Wireless Sun Sensor from the Dutch Government Research Institute (TNO).

Mr. Ubbels' letter says that Delfi C-3 has been duly coordinated through the Region 1 IARU representative, Mr. Graham Shirville, G3VZV, and that the satellite meets all of the criteria necessary to be issued an OSCAR number.

In response to the information provided by Mr. Ubbels, I hereby issue the designation Delfi-C3 OSCAR-64 or Dutch OSCAR-64. The shortened version of either of these two designation would, of course, be, DO-64.

AMSAT-NA is pleased to welcome DO-64 into the family of amateur Radio satellites. We are hopeful that it will fulfill its intended mission of furthering education and increasing interest in the Amateur Radio space program. We congratulate all of those responsible for designing, building, testing and launching this new Amateur Radio satellite and look forward to its long and productive life.

73,
William A. (Bill) Tynan, W3XO

[ANS thanks Bill, W3XO for the above information]

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SB SAT @ AMSAT $ANS-138.03
AMSAT at Dayton - First Report

AMSAT News Service Bulletin 138.03
>From AMSAT HQ SILVER SPRING, MD.
May 18, 2008
To All RADIO AMATEURS
BID: $ANS-138.03

The AMSAT booth at the Dayton Hamvention included the first stages of the full-scale engineering unit of the Eagle satellite structure. This consists of the inner 4 honeycomb panels where electronics are mounted, along with four channels and two electronics boxes. The half-scale model of Eagle was also on display. After the Hamvention the Eagle engineering unit will return to the AMSAT Maryland Lab for further development, integration, and testing.

Radio amateurs were able to get a taste of satellite operations at the live satellite demos. Using the callsign W5IU the demo team was on-the-air via AO-7, AO-16, AO-27, AO-51, and VO-52 on Friday, Saturday, and Sunday.

Tom Clark, K3IO gave a presentation discussing the highlights of AMSAT's technical achievement and plans at the ARRL TTF Forum. The AMSAT forum provided updates on Eagle and Intelsat. More information will be coming in future weeks via ANS and the AMSAT Journal.

AMSAT Engineering representatives were on hand to show off and discuss project status for the ACP, Eagle, Phase IV, P3E, SuitSat-2, and digital encoding.

The combined AMSAT/TAPR Banquet was one of the more popular events of the weekend. Pictures and more stories to follow when they are ready.

The Spring 2008 issue of CQ-VHF magazine, planned to be available at the Hamvention, featured AMSAT in three articles. Lou W5DID & JoAnne K9JKM had an article covering SuitSat-2. Bob KF4KSS & JC W3JCT had an article about AMSAT's new lab, and Keith W5IU wrote a column of amateur radio in space history and AMSAT's history.

[ANS thanks everyone for the above information]

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SB SAT @ AMSAT $ANS-138.04
AO-16 Operations Update

AMSAT News Service Bulletin 138.04

>From AMSAT HQ SILVER SPRING, MD.
May 18, 2008
To All RADIO AMATEURS
BID: $ANS-138.04

The AO-16 satellite has undergone a few periods of turning off with subsequent restarts ensuring operation for varying periods of time.

Mark, N8MH, Control Operator turned AO-16 ON in voice mode to suppot a Scouting Special Events Station. The output power was reduced slight-ly in an attempt to conserve power in the event that batteries or the solar cells were having problems.

George, KA3HSW, operating from the Scouting Event wrote, "Many thanks to Mark for making AO-16 available during the K9BSA Scout-O-Rama demonstration yesterday, and MANY, MANY thanks for "advertising" that our station was there on the 1950Z pass... we worked quite a number of stations, thanks in large part to Mark's announcement on the bird."

In response to observing stations around the world reporting AO-16 was turned off again Mark provided the latest information, "AO-16 continues to exhibit difficulty in keeping the transmitter turned ON. The last few days I have turned it ON as my schedule permits, only to see it turn itself OFF after a short time (sometimes minutes, other times a few hours). So, it hasn't been turned ON much over the last several days. It is looking less likely to be a power budget issue, and more likely that there is something going on with the hardware in the spacecraft; but this is still speculation. Time will tell. I wish the news was better!"

If you hear AO-16 in voice mode, free to use it. If you hear it "hummmming" in digital mode, please do not transmit to the satellite.

AO-16 Uplink: 145.920 MHz FM
AO-16 Downlink: 437.0260 MHz DSB (LSB and USB)

[ANS thanks Mark, N8MH for the above information]

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SB SAT @ AMSAT $ANS-138.05
Second Call For Speakers at AMSAT-UK Colloquium

AMSAT News Service Bulletin 138.05
>From AMSAT HQ SILVER SPRING, MD.
May 18, 2008
To All RADIO AMATEURS
BID: $ANS-138.05

This is the second call for speakers for the 22nd Amsat-UK Colloquium which will be held at Surrey University, Guildford, Surrey, U.K., from Friday 25th July to Sunday 27th July 2008.

Details of this and previous events can be found at:
http://www.uk.amsat.org.

Amsat-UK invite speakers, about amateur radio space and associated activities, for this event. They are also invited to submit papers for the "Proceedings" document which will be published at the same time but printed papers are not mandatory. We normally prefer authors to present talks themselves rather than having someone else give them in the authors' absence. We also welcome "unpresented" papers for the Proceedings document.

Offers of talks should be submitted as soon as possible; the final
date for full documents to be received is late-June 2008 in order
that the "Proceedings" document be available to participants.

Submissions should be sent *ONLY* to G4DPZ, via the following routes:

Internet e-mail: dave @ g4dpz dot me dot uk

SnailMail: QTHR from http://www.qrz.com

AMSAT-UK also invite anyone with requests for Program Topics to
submit them as soon as possible to G4DPZ. Invitations for any
papers on specific subjects will be included in the future call.
Likewise if anyone knows of a good speaker, please send contact
and other information to G4DPZ.

[ANS thanks Dave, G4DPZ for the above information]

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SB SAT @ AMSAT $ANS-138.06
Satellite Shorts From All Over

AMSAT News Service Bulletin 138.06
>From AMSAT HQ SILVER SPRING, MD.
May 18, 2008
To All RADIO AMATEURS
BID: $ANS-138.06

+ Yuta Araki, JQ1YGV at Nihon University says an updated version of
  the SEEDS cubesat telemetry analysis software is available from
  http://cubesat.aero.cst.nihon-u.ac.jp/english/download_e.html. This
  will be Ver.2.0.2 of Downlink Code for Distribution.

+ Spaceweather.com's simple Satellite Tracker has gone global. The
  tool now works not only for US and Canadian readers, but also for
  sky watchers in countries around the world. This development comes
  as the International Space Station is making bright and frequent
  nightly apparitions over Europe, Africa, the Middle East, parts of
  Asia and Australia. If you live in those areas, give it a try:
  http://spaceweather.com/flybys [via SpaceWeather.com]

+ Art Feller, W4ART has posted photos from AMSAT/ARISS participation
  at Space Day at the National Air and Space Museum to:
  http://picasaweb.google.com/oojimoe/2008SpaceDayNASM

[ANS thanks everyone for the above information]

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SB SAT @ AMSAT $ANS-138.07
ARISS Status Report for the Week of May 12, 2008

AMSAT News Service Bulletin 138.07
>From AMSAT HQ SILVER SPRING, MD.
May 18, 2008
To All RADIO AMATEURS
BID: $ANS-138.07

1. Upcoming School Contact

Delta Researchers Schools 2008, Space Expo in Noordwijk, the Netherlands, has been scheduled for an ARISS contact via telebridge station WH6PN in Hawaii. The contact will take place on Friday, May 23 at 15:01 UTC. Twelve Dutch primary schools which participate in the Delta-project will be represented at Space Expo. The project is a cooperation of the Dutch ministry of Education, Culture and Science, the European Space Agency (ESA) and NASA. The schools participating in the project use the themes of space and space exploration to teach science and technology. Three children (ages 7 - 12) from each school will be present.

2. Armada Area Schools - ARISS Contact Postponed

The ARISS contact which was scheduled with Armada area schools in Michigan on May 9 was postponed due to crew scheduling issues. It will be rescheduled in the fall. In place of the May 9 contact, the Teaching From Space Office at Johnson Space Center arranged a teleconference between the Armada students and astronaut Bill McArthur in Houston Texas. Bill spent several minutes talking about the International Space Station and answered in detail 15 student questions. There were approximately 550 participants present at the school. The Teaching From Space Office also sent an educational resource package to the school which included seeds that were flown in space. The Armada schools are looking forward to a direct ARISS contact in the fall.

3. ARISS Founder Ron Parise Passes on

Astronaut Ron Parise, WA4SIR, passed away on Friday, May 9. Ron was a key player in the development of the ARISS program and a strong supporter of educational outreach activities. He spoke with hundreds of hams on the ground during his Shuttle flights STS-35 and STS-67 and was the first to operate packet radio in orbit. He was instrumental in developing both the ISS Ham radio systems currently onboard the ISS and the telebridge station concept with the specific purpose of encouraging students to pursue studies in technical fields.

The American Radio Relay League (ARRL) published this story:
http://www.arrl.org/news/stories/2008/05/10/10092/?nc=1

4. ARISS Member Interviewed on Australian TV

ARISS member Tony Hutchison, VK5ZAI, was interviewed and appeared on the Australian Channel 7 Today Tonight Show. He described his work with the educational ARISS program. The Wireless Institute of Australia (WIA) posted the news clip with permission from Channel 7. See:
http://www.wia.org.au/discover/videoaudio/video/documents/Low_VK5ZAI_Today_Tonight_320X240X256.wmv

5. NASA Tool Aids Amateur Radio Operators

The American Radio Relay League (ARRL) ran an article covering NASA's new 4D Ionosphere tool. The tool can aid amateur radio operators in radio communications. To view the story, go to:
http://www.arrl.org/news/stories/2008/05/07/10081/?nc=1

NASA's article has been posted to:
http://science.nasa.gov/headlines/y2008/30apr_4dionosphere.htm?list212589

6. Wings over the Rockies Amateur Radio Event

On Friday, May 23, Wings over the Rockies Air and Space Museum in Denver, Colorado will open a new exhibit, "Colorado's Astronauts: in their own words." It will also host ceremonies for the presentation of NASA's Ambassador of Exploration Award honoring one of Colo-

rado's astronauts, Jack Swigert. NASA officials will present the award to Jack Swigert's sister, Virginia Swigert. Guests include James A. Lovell, Fred Haise, Ken Mattingly as well as other astronauts and Colorado Governor Bill Ritter. To celebrate the event, an amateur radio special event station K0WAR, will operate on 14250 or 7250 kHz from 09:00 to 21:00 local Denver time (May 23, 15:00 UTC to May 24, 03:00 UTC). An 8-1/2 x 11 QSL certificate will be distributed to confirmed contacts providing an SASE. For more information on the event, see: http://www.wingsmuseum.org/index.php

7. ARISS Presentation at Dayton Hamvention

The American Radio Relay League (ARRL) and the Radio Amateur Satellite Corporation (AMSAT) both supported exhibit booths the Dayton Hamvention. ARISS Australian telebridge operator Tony Hutchison, VK5ZAI, gave a presentation on "A Ham Radio Operator's View of ARISS" at the AMSAT forum covering new ARISS initiatives and a status report on SuitSat-2. The Dayton Hamvention is an internationally attended amateur radio convention that draws crowds of 25,000 annually. For more information on Dayton Hamvention 2008, go to: http://www.hamvention.org/hv2008/forums/forumlist.htm

[ANS thanks Carol, KB3LKI for the above information]

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In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT Office.

73,
This week's ANS Editor,
JoAnne Maenpaa, K9JKM
K9JKM at amsat dot org